

Brown (Fr. H.)

IMPACTED FOREIGN BODIES
IN THE
EXTERNAL AUDITORY MEATUS.

By FRANCIS H. BROWN, M.D., BOSTON.

Reprinted from the AMERICAN JOURNAL OF OTOTOLOGY, January, 1881.



IMPACTED FOREIGN BODIES
IN THE
EXTERNAL AUDITORY MEATUS.



BY

FRANCIS H. BROWN, M.D.,
BOSTON.

Reprinted from the AMERICAN JOURNAL OF OTOTOLOGY, January, 1881.

NEW YORK :
TROW'S PRINTING AND BOOKBINDING COMPANY,
201-213 EAST TWELFTH STREET.
1881.

IMPACTED FOREIGN BODIES IN THE EX- TERNAL AUDITORY MEATUS.

I WISH to discuss, very briefly, the presence in the external ear of a series of foreign bodies which from their size nearly or entirely correspond with the extreme calibre of the meatus, and especially of those of a vegetable character, which expand by moisture and hence are liable to become, to a greater or less extent, impacted.

The view which I entertain is, to a certain extent, in opposition to that expressed by writers on the subject, but I think a word may fairly be said for what seems to me the rational treatment of such cases.

Judging from the remarks of some authors, the meatus auditorius is looked on as a *terra incognita*, much as the colon or the pleural cavity would be, and its investigation to be entered on as we should that of any of the inner organs of the body. Every practitioner should, on the contrary, recognize the fact that the entire passage of the outer ear is within his sight and that the treatment of its diseases should be governed by the same rules which would dictate his care of any other portion of the body's surface.

In looking over the works of various authors on aural surgery I find a marked sameness in the ideas expressed by them ; the same list of foreign bodies is given in detail ; the same cases, some important and many unimportant, are referred to and passed from one to the other ; while the same line of treatment, whether wise or unwise, or failure to treat, apparently becomes hereditary to each new writer on the subject, and is deemed the canonical method. The foreign bodies which particularly claim our attention now are those vegetable substances, such as beans, peas, and kernels of corn, which nearly occupy the passage at the first, which become swollen, and thus more serious intruders by their increase in bulk. For the re-

moval of such foreign bodies the syringe, probe, curette, and similar instruments often prove of no avail, though of frequent use in the elimination of loose substances. The successful use of the syringe (and I certainly agree with all authors, from the earliest to the most recent, that this method of elimination is, without doubt, the best when it can be employed) implies a comparatively loose body, certainly one which does not entirely close the meatus, and which allows either the nozzle of the syringe to be insinuated, or the stream of water to be forced beyond it. In all such cases the *vis a tergo* offered by the water can seldom fail to bring out the foreign body.

Dr. Dewitt somewhat quaintly remarks, "The surgeon should always make certain, by an examination with the speculum, that there *is* a foreign body present before he begins poking instruments into the ear, remembering that a late eminent hospital surgeon is said to have dragged out the stapes while fishing for a small nail which was not in the ear at all."

The point I wish to make is that tightly impacted bodies in the ear *must* be removed; that the practice of allowing them to rest, even in cases where no apparent and immediate irritation or inflammatory action are present, does not offer assurance that subsequent trouble will not arise, and, in fact, that at some time or other, with the accumulation of cerumen in the ear, with the access of a cold, or by some other means, the meatus is very likely to take on inflammatory action, in which case the integrity of the middle ear may be jeopardized. If the body is firmly impacted in the ear from the first its very presence and pressure induce œdema of the meatus, and the longer it remains, the more unsatisfactory will be the attempt to remove it.

Gruber, in the *Wiener medizinische Zeitung*, advises extreme caution in extracting foreign bodies, and follows the advice of Diefenbach and others, to allow them to remain an indefinite time, until swelling is reduced and suppuration has, to a certain extent, ceased. It must have occurred to the learned otologist that a collection of pus behind the body would act seriously on the membrane and might cause grave injury to that portion of the ear, as

well as to those more central still. I cannot help feeling that the foreign body, while it remains within the meatus, must be a constant source of irritation, and no delay whatever will release a body which is actually firmly impacted.

A writer in the *Dublin Medical Press*, of January 27, 1864, says: "Beyond a forceps, an ear-scoop, with a long handle, and a small cork-screw, almost all the instruments recommended for this purpose are, more or less, toys or dangerous. . . . If the gentlest endeavor (or syringing), during which the eye guides the hand, do not succeed, the body should be left in the ear—aye, 'even were it a dagger's point'—and, strong as the expression seems, the author justifies it by reference to cases on record in which pointed bodies have remained for years in the ear with impunity. . . . Leaving the body in the ear then, warm water syringing and soft poultices are to be resorted to until the ensuing suppuration loosens it and gives it a new direction." Von Tröltzsch says: "Generally the presence of these bodies in the ear is less injurious than the attempt to remove them."

As examples of what may be expected when such foreign bodies are allowed to remain, Mr. Hutchinson speaks of a child with a locust bean in its ear, "which it has been found impracticable to remove. After persevering attempts he tried his favorite method with a loop of wire, but found it impossible to get the wire round, as the bean had swollen and filled the cavity. A second attempt was made in a few days with a like result. A week later the child was feverish and had much pain in the head. Then paralysis of the portio dura came on."

Lowenburg, in his paper on the agglutinative process, announces that the vast majority of practitioners are unable to use the ordinary instruments for extracting foreign bodies from the ear without injury to the patient, and narrates many cases to prove that not only the patient suffers more from attempts at extraction, but that it not infrequently happens that the surgical interference has been applied to the wrong ear, and states that children have been brought to him with the right ear inflamed, as the result of manipulation on the part of friends or inexperienced surgeons, while the

foreign body was lying unnoticed and harmless in the left ear. He would exclude all instrumental interference with foreign bodies, and would confine himself solely to the use of the syringe or the agglutinative method, a process which he claims was employed by Celsus (Lib. VI., cap. 7). It must be remembered, however, that there are cases in which the pressure on the lining membrane has been so great as to cause a burr of an œdematous character, which the feeble traction of the agglutinative process would have no power to overcome.

As indicative again of the caution which it is necessary to use in the treatment of the ear, Sir Benjamin Brodie speaks of a child with a pea in its ear, in which the membrana tympani was broken in the attempts to extract it, and death ensued. On examination of the body after death the membrana tympani was found to have been destroyed by the violence which had been used, the pea had been forced into the tympanum, and the rough usage of that cavity had caused inflammation, which had extended to the membranes of the brain.

The whole series of forceps, from the crude instruments of the earliest surgeons to those of the present day, are manifestly unfit for securing a firm grip on a foreign body which presents but a small part of its surface, and that a convex one, to their grasp. To this remark I make the one exception of the Tiemann bullet forceps, so successfully used in the late war of the rebellion, and its smaller form, which finds a place in some of the pocket cases of the present day. In this instrument the teeth are set in such a manner that even when only a small part of the foreign body can be reached, they can be firmly engaged in it and a considerable extractive force can be employed. It will be remembered that a trifle more of space is obtained and the ease of extraction increased in the case of a tightly fitting body, if the patient is caused to open his mouth during the process, an experiment which any one can try by putting his little finger in his ear.

Were it not recommended by such a man as Von Tröltzsch, it would seem the height of barbarism, as well as utterly futile, to make an opening into the auditory canal behind the ear, and in-

deed, as the body is generally deeply inserted, it is difficult to see how such a manœuvre could be of any practical utility, but Von Troeltsch distinctly says (*Hay's Journal*, XLVIII., 394), "If a case came under my observation where an impacted body produced such symptoms as to indicate an energetic mode of treatment for its removal, and delay was not practicable, I should hasten to extract it by an operation, by making an opening through the wall of the meatus, so as to admit of its being approached and seized from behind." As Dr. Gross says, "The idea of separating the auditory canal from the squamous process of the temporal bone, with a view of obtaining access to the extraneous substance, as suggested by Von Troeltsch is so absurd that it ought to be ranked among the exploded notions of the barbarous ages."

To bear me out in my view that an impacted body, of the kind mentioned, should be extracted from the ear, if, by any possibility it can be accomplished, the remarks of three authors are in point. Nottingham, in his "Diseases of the Ear," says: "A seed, or other vegetable substance, capable of expansion, not to say of germination, should not, on any account, be allowed time for the alteration alluded to; for the suffering produced by any body of the kind, expanding within the deeper and unyielding part of the meatus, and hence pressing upon its highly sensitive surface, is of a most disturbing, not to say maddening character."

Voltolini mentions the fact that the "lining of the meatus is of great importance; for while the cutis, as long as it covers the cartilaginous portion of the meatus is 1.5 mm. in thickness, as soon as it passes on to the bony portion of this organ, it becomes suddenly only 0.1 mm. or fifteen times less thick, and so intimately and firmly is it here united to the periosteum that it comes away with the periosteum from the bone rather than admit of being separated from it, so that the important result occurs that every inflammation of the cutis is also a periostitis, and the covering of the meatus may be easily injured, leaving the bone bare." Voltolini has used the galvano-cautery in these cases with the best effect. Employing the finest points he gradually burns a hole through the foreign body, which, being thus broken up, is easily removed.

Guersant, in a number of the *Bul. gén. de thérapeutique*, says, "All these foreign bodies, when they remain in the auditory canal, principally those which swell up, may occasion severe accidents, such as inflammation, suppuration, cerebral symptoms, meningitis. Hence it is important to relieve, as soon as possible, children who have in their ears a pea or a seed which may swell up on becoming moist."¹

¹ Since the above article was sent to the printer a case of impacted foreign body has occurred in a patient of Dr. C. J. Blake. He kindly asked me to see it with him, and has allowed me to mention it. F., a clergyman's child, five years of age, presented himself, having a foreign body of considerable size deeply and firmly impacted in the ear. The syringe, curette, and other instruments had been applied without effect. The foreign body presented a convex surface of limited extent, on which ordinary forceps had no hold. It was found to be immovable. The child was etherized, a strong ray of light was thrown into the ear by the frontal mirror, and then, by the aid of the Tieman forceps, Dr. Blake removed a full-sized kernel of corn. The well-marked burr, to which reference was made in the article, had formed both before and behind the foreign body. The condition existed which has been already described. The body had been so firmly forced into the ear that pressure was exerted on the lining membrane, and a burr of œdema had ensued. This in itself would go far toward preventing examination of the body by ordinary means. Moreover, the pressure on the thin cuticle could not fail of inducing inflammation of the periosteum immediately beneath it, and the occlusion of the meatus would imprison any secretion which might be formed and render it impossible to observe changes occurring near the membrane. Under these conditions and liabilities forcible extraction was urgently called for.

